

Attorney Docket No.: LVIP:106US  
U.S. Patent Application No. : 10/604,135  
Reply to Office Action of December 16, 2004  
Date: March 16, 2005

**Amendments to the Drawings**

The attached Replacement Sheet includes changes to Figure 2 to recite --Prior Art-- as requested by the Examiner. Replacement Sheet may be found in the **Appendix**.

**Remarks/Arguments**

**Objections to the Specification**

Applicant respectfully submits that the sentence --The heat emission of the illumination system is intended to be as low as possible-- of paragraph [0024] is grammatically sound and does not comprise an incomplete sentence. Nevertheless, Applicant has amended paragraph [0024] to revise the sentence. No new matter has been entered.

Reversal of the objection is courteously requested.

**Objections to the Drawings**

Applicant has amended Figure 2 to recite --Prior Art--. No new matter has been added. Reversal of the objection is courteously requested.

**Claim Rejections under 35 U.S.C. §103 (Obviousness)**

The Examiner rejected Claim 1 as being obvious in view of the teachings of German Patent Application No. DE 32 24 375 (Bilek), German Patent Application No. De 36 15 713 (Wolf), and U.S. Patent Application Publication No. 2003/0024368 (Fukuoka). Applicants respectfully traverse the rejection inasmuch as the rejection may apply to the amended and new claims.

First, amended Claim 1 now includes the limitation that the invention comprises at least one light source acting as a base-mounted illumination system, at least one light source acting as an incident illumination system, and at least one light source acting as an internal preparation illumination system wherein the illumination systems comprise LED's and are configured to illuminate the region around the preparation. New Claim 10 includes the limitation that the base mounted illumination system and internal preparation illumination systems comprise LED's. New Claim 11 includes the limitation that the base mounted, incident, and internal preparation illumination systems comprise LED's. Bilek does not disclose, teach or suggest a microtome comprising an internal preparation illumination system as required by Claims 1, 10 and 11, Wolf does not disclose, teach or suggest a base-mounted illumination system or an internal preparation

illumination system as required by Claims 1, 10 and 11, and Fukuoko does not relate to microtomes and clearly does not disclose, teach or suggest a microtome comprising a base-mounted illumination system, an incident illumination system or an internal preparation illumination systems or that such systems comprise LED's.

Second, "to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some teaching, suggestion or motivation, either in the references themselves or in the knowledge generally available to one having ordinary skill in the art, to modify the references or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined), must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis Added). The Examiner has not established a *prima facie* case of obviousness with regard to amended Claim 1 and new Claims 10 and 11.

There is no motivation to select Fukuoka for combination

"In order to rely on a reference as the basis for rejection of an applicant's endeavor, the reference must be either in the field of applicant's endeavor or, if not, be reasonably pertinent to the particular problem with which the invention was concerned." MPEP §2141.01(a) (emphasis added).

In the present case, Fukuoka is not analogous to the present invention, is not in the field of applicant's endeavor and is not reasonably pertinent to applicant's problem. More specifically, the Applicants' invention comprises a microtome or ultramicrotome for preparing thin sections of samples for microscopy, typically frozen tissue sample. As such the illumination system of the present invention is adapted to minimize the formation and/or the emission of heat. On the contrary, the device described by Fukuoka comprises a circular saw. A circular saw is not concerned with preparing thin tissue samples for microscopy, nor is such device concerned with minimizing heat. Thus, Fukuoka is not analogous to the present invention, is not in the field of

applicant's endeavor, nor reasonably pertinent to applicant's problem. Furthermore, in view of the fact that the inventions are not analogous to one another, Fukuoka is classified in Class 83 (Cutting tool) Subclass 698.41 (Rotary) because "the tool is one carried to turn at least 360 degrees about an axis passing therethrough comprising means for (a) securing that tool to its support or (b) for securing that tool to another tool," whereas the present invention is more appropriately classifiable in Class 83 (Cutting tool) Subclass 915.5 (Microtome) because it cuts "thin sections, usually of organic tissue, for microscopic examination". (See class definitions). Finally, one having ordinary skill in the art would readily recognize the differences between the two inventions. Thus, there is no motivation to select Fukuoka for combination with Bilek or Wolf thereby rendering the present invention nonobvious.

There is no teaching, suggestion or motivation to make to combination/modification.

"Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one having ordinary skill in the art." MPEP §2143.01 (emphasis added).

In the present case, none of Bilek, Wolf or Fukuoka contain an express or implied teaching, suggestion, or motivation to combine/modify the reference teachings to create the claimed invention and the Examiner has not illustrated, by reference to objective evidence, that the motivation to make the combination/modification emanates from that knowledge generally available to one having ordinary skill in the art.

While Bilek may disclose a sub-level (base-mounted) illumination system and incident illumination systems, he does not disclose a microtome comprising an internal preparation illumination system as required by Claims 1, 10 and 11. Moreover, Bilek does not even suggest an internal preparation illumination system. Additionally, while Bilek may disclose a sub-level light source, he does not disclose that the light source comprises an LED and does not suggest the use of LED's.

While Wolf may disclose the use of a diode, his use of such diode, along with a potentiometer and a converging lens 90, is configured to serve as a sensor for monitoring changes in movement of the specimen by reflecting light off of a high gloss plane cut surface of the specimen. While Wolf may disclose reflecting light off the specimen, the light intersecting the specimen is focused by means of a converging lens such that Wolf does not disclose, teach or suggest that the light illuminates the region around the preparation as required by Claim 1. Furthermore, while Wolf discloses the use of an LED, he does not disclose that the LED is configured to illuminate the preparation region such that it may be visually perceived by an observer. Indeed, sensing devices comprising LED's commonly utilize wavelengths of light that are visually imperceptible to an observer, e.g., IR light, such that the LED may not even illuminate the specimen at the point of intersection. Finally, Wolf does not disclose, teach or suggest a base-mounted illumination system or an internal preparation illumination system as required by Claims 1, 10 and 11.

As previously indicated, Fukuoko does not relate to microtomes and clearly does not disclose, teach or suggest a microtome comprising a base-mounted illumination system, an incident illumination system or an internal preparation illumination systems or that such systems comprise LED's.

Additionally, the Examiner has not proffered any objective evidence to illustrate that the teaching, suggestion or motivation to make the combination/modification emanates from that knowledge generally available to those having ordinary skill in the art.

Finally, there is no reasonable expectation of success. Indeed, there are perhaps millions of ways by which teachings of Bilek, Wolf and Fukuoko may be combined, however, there must be some teaching, suggestion or motivation to take those specific elements from the references and combine them in the manner of the applicant to create the present invention. In the present case, none of the references cited by the Examiner, or knowledge generally available contain such teachings, or suggestion or motivation, such that there is no reasonable expectation of success.

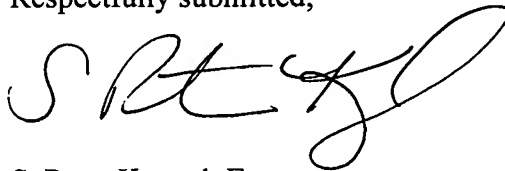
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For the reasons set forth above, the rejection should be reversed.

**Conclusion**

For the reasons set forth above, Applicant respectfully submits that the present application is now in condition for allowance, which action is courteously requested

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'S. Peter Konzel', written in a cursive style.

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**Appendix**